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UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PUBLIC ROADS
DIVISION OF AGRICULTURAL ENGINEERING

S. H. McCrory, Chief

MONTHLY NEWS LETTER

WASHINGTON, D. C., August 22, 1927

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: THE GENERAL LETTERS OF AUTHORIZATION THIS YEAR :
: HAVE IN MANY CASES BEEN CONSIDERABLY LIMITED AS TO :
: TERRITORY, AS COMPARED WITH LETTERS OF FORMER YEARS. :
: THE INTENTION IS TO LIMIT THE AUTHORIZATION TO THOSE :
: AREAS IN WHICH TRAVEL IS NECESSARILY FREQUENT. :
: TRAVEL TO OTHER POINTS MUST BE COVERED BY AN AMEND- :
: MENT AND IT IS IMPORTANT THAT APPLICATION FOR SUCH :
: AMENDMENTS BE MADE IN AMPLE TIME TO ENABLE AUTHORIZ- :
: ATION TO BE GIVEN BEFORE THE TRIP IS BEGUN. :
:.....

ABOUT THE MIDDLE OF JULY, Mr. McCrory addressed a meeting at TULSA, OKLAHOMA, CALLED IN THE INTERESTS OF FLOOD PREVENTION. AT THIS MEETING WERE REPRESENTED PROMINENT PERSONS FROM SEVEN STATES DRAINED BY THE ARKANSAS RIVER AND TRIBUTARIES. THE SUBJECT OF Mr. McCrory's address was "EROSION AND ITS RELATION TO DRAINAGE AND FLOOD CONTROL." AFTER THE TULSA MEETING Mr. McCrory proceeded to TALLULAH, LOUISIANA, TO CONFER WITH MESSRS. JOHNSON AND BENNETT WITH REFERENCE TO THE COTTON DRYING PROJECT. FROM TALLULAH, Mr. McCrory went to TOLEDO, OHIO, WHERE HE ATTENDED A CONFERENCE AS A MEMBER OF THE DEPARTMENT CORN BORER COMMITTEE. THE OBJECT OF THIS MEETING WAS TO FORMULATE A PROGRAM FOR FURTHER WORK IN CONNECTION WITH THE CONTROL OF THIS PEST.

A LABORATORY HAS BEEN FITTED UP IN ONE OF THE ROOMS OF THE WASHINGTON OFFICE FOR THE PURPOSE OF CARRYING ON THE EXPERIMENTS ON DETERMINING THE DRAINAGE INDEX OF SOILS UNDER THE CHARGE OF F. E. STAEBNER. THE EQUIPMENT CONSISTS OF A MODERN CENTRIFUGE FOR MOISTURE EQUIVALENT DETERMINATIONS (BUREAU OF SOILS TYPE) TWO LABORATORY TABLES, EACH WITH DRAWERS AND CUPBOARD SPACE AND ONE EQUIPPED WITH A SINK. A STONE SHELF, MOUNTED ON THE BRICK WALLS IN A CORNER OF THE ROOM FURNISHES SUPPORT FOR THE LABORATORY BALANCES. THE ROOM IS SUPPLIED WITH GAS, ELECTRICITY AND WATER.

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PLANT INDUSTRY
WASHINGTON, D. C.

REPORT OF THE COMMISSIONER OF PLANT INDUSTRY

FOR THE YEAR 1911

The Commission on Plant Industry was organized on July 1, 1909, and has since that time been engaged in a study of the various problems connected with the development of the plant industry of the United States. The Commission has held numerous public hearings and has received many suggestions from interested parties. It has also conducted extensive research into the various phases of the plant industry, and has prepared a number of reports on its findings.

One of the most important of these reports is the report on the "Plant Industry of the United States," which was published in 1910. This report contains a detailed description of the various phases of the plant industry, and also presents a number of suggestions for the improvement of the same. The Commission has also prepared a number of other reports on specific phases of the plant industry, and has been actively engaged in the study of the various problems connected with the development of the same.

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AMONG THE USUAL LABORATORY TESTS WHICH IT IS PLANNED TO MAKE ARE THE FOLLOWING: FEELING, COLOR, APPARENT SPECIFIC GRAVITY, MOISTURE EQUIVALENT, PLASTICITY, SHRINKAGE, WATER HOLDING CAPACITY, CAPILLARY MOISTURE TESTS, PORE SPACE, ELUTRIATION.

THE FOLLOWING TESTS WHICH ARE PERHAPS NOT SO USUAL WILL ALSO BE UNDERTAKEN: PERCOLATION TESTS ON DISTURBED SOILS, APPARENT SPECIFIC GRAVITY OF SMALL SAMPLES OF UNDISTURBED STRUCTURE, SHRINKAGE OF SIMILAR SAMPLES, ALSO WATER-HOLDING CAPACITY AND PORE SPACE TESTS.

A FURTHER GROUP OF TESTS WHICH MAY BE MADE INCLUDE THE FOLLOWING: TRUE SPECIFIC GRAVITY, PENETRATION TESTS ON THE UNDISTURBED STRUCTURE (A DENSITY DETERMINATION), FIELD CARRYING CAPACITY, HYGROSCOPICITY, HEAT OF WETTING, CRITICAL MOISTURE CONTENT, MECHANICAL ANALYSIS, CHEMICAL DETERMINATIONS, ORIGIN, NATURE AND DEGREE OF WEATHERING, WATER CONTENT, HUMUS CONTENT RATIOS.

GLENN A. CUMINGS WAS APPOINTED AS ASSOCIATE AGRICULTURAL ENGINEER AND REPORTED FOR DUTY AT WASHINGTON, D. C. JULY 28. MR. CUMINGS COMES HERE FROM COLORADO WHERE HE HAS BEEN CONNECTED WITH THE AGRICULTURAL COLLEGE AT FORT COLLINS. HIS FIRST ASSIGNMENT IS TO CONTINUE THE INVESTIGATION HERETOFORE CARRIED ON BY R. B. GRAY AND M.A.R. KELLEY, AND DESIGNED TO DEVELOP SUITABLE MACHINERY FOR DISTRIBUTING CONCENTRATED FERTILIZERS. THIS EXPERIMENTAL WORK IS BEING DONE AT THE ARLINGTON FARM, NEAR WASHINGTON.

EARLY IN AUGUST M.A.R. KELLEY MADE A TRIP TO LANCASTER, PENNSYLVANIA, AT THE REQUEST OF THE PENNSYLVANIA STATE EXTENSION SERVICE, WHERE HE MET JOHN R. HASWELL FOR THE PURPOSE OF ADVISING ON THE VENTILATION OF TOBACCO BARNs.

THE COOPERATIVE PROJECT WITH THE BUREAU OF PLANT INDUSTRY AND AGRICULTURAL ECONOMICS, AND VARIOUS STATE EXPERIMENT STATIONS, INVOLVING A STUDY OF THE USE OF THE COMBINE HARVESTER IS PROGRESSING. W. M. HURST IS AT PRESENT IN SOUTH DAKOTA MAKING A STUDY OF COMMERCIAL GRAIN DRYING WHICH IS AN IMPORTANT PHASE OF THE COMBINE PROJECT. W. R. HUMPHRIES HAS SPENT TWO OR THREE WEEKS AT LAFAYETTE, INDIANA, AND VICINITY ON THE SAME PROJECT. LATER HE WILL PARTICIPATE IN A STUDY OF THE SOY BEAN HARVEST IN INDIANA.

GEORGE R. BOYD, WHO HAS BEEN IN THE FAR WEST SINCE JULY 1, IN THE INTERESTS OF THE DISTRIBUTION OF PYROTOL, HAS RETURNED TO RICHMOND.

AFTER SPENDING ABOUT A MONTH IN WASHINGTON, S. J. DENNIS HAS RETURNED TO MASSACHUSETTS FOR CONTINUATION OF HIS WORK FOR THE BUREAU OF ENTOMOLOGY, IN THE DEVELOPMENT OF SUITABLE SPRAY MACHINERY FOR THE CONTROL OF THE GYPSY MOTH.

ONE OF THE PRIMARY PROBLEMS OF THE CORN BORER CONTROL IS THE DEVELOPMENT OF A SUITABLE OIL BURNING DEVICE FOR BURNING STUBBLE IN THE FIELD. J. T. BOWEN HAS BEEN ASSIGNED TO THIS PROBLEM AND HAS MADE CONSIDERABLE PROGRESS IN DEVELOPING OIL BURNING APPARATUS THAT PROBABLY WILL BE PUT INTO EXPERIMENTAL USE IN A FEW MONTHS.

THE FOLLOWING REPORTS HAVE BEEN RECEIVED AT THE BERKELEY OFFICE:

"THE IMPROVED VENTURI FLUME," BY RALPH L. PARSHALL.

"STUDIES OF MIDDLE RIO GRANDE VALLEY GROUND WATER AND OF ITS RELATION TO DRAINAGE," BY DEAN W. BLOODGOOD.

"ANNUAL REPORT OF THE IRRIGATION DEPARTMENT, FISCAL YEAR 1926-1927", BY DEAN W. BLOODGOOD, SUMMARIZING THE WORK IN NEW MEXICO CARRIED ON IN COOPERATION WITH THE AGRICULTURAL EXPERIMENT STATION.

A REPRINT OF C. E. RAMSER'S ARTICLE ON "RUN-OFF FROM SMALL AGRICULTURAL AREAS", PUBLISHED IN VOL. 34, NO. 9, OF THE JOURNAL OF AGRICULTURAL RESEARCH HAS JUST BEEN RECEIVED.

W. W. McLAUGHLIN VISITED POINTS IN UTAH AND IDAHO, IN CONNECTION WITH COOPERATIVE WORK DURING THE FISCAL YEAR.

F. C. SCOBIE VISITED COLORADO DURING THE MONTH IN ORDER TO ATTEND THE MEETING OF THE COMMITTEE ON IRRIGATION HYDRAULICS OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS AT FORT COLLINS, HELD IN THE OFFICE OF MESSRS. PARSHALL AND ROHWER AT THE AGRICULTURAL COLLEGE; AND TO SECURE DATA ON FLUME CAPACITIES ON THE UNCOMPAHGRE AND GRANDE VALLEY PROJECTS.

PAUL A. EWING AND ARTHUR A. YOUNG MADE A TRIP DURING JUNE TO THE INTERIOR VALLEY OF CALIFORNIA TO SECURE INFORMATION RELATING TO DRAINAGE DISTRICTS.

F. L. BIXBY WAS IN THE BERKELEY OFFICE ENROUTE TO SOUTHERN NEVADA IN CONNECTION WITH THE COOPERATIVE PROJECT AT LAS VEGAS.

R. G. HEMPHILL PRESENTED A PAPER ON DUTY OF WATER IN CROP PRODUCTION AS A PART OF THE WATER CONSERVATION AND UTILIZATION PROGRAM OF THE TEXAS A. & M. COLLEGE FARMERS' SHORT COURSE. REPRESENTATIVES OF ALL FEDERAL, STATE AND LOCAL AGENCIES ENGAGED IN PROMOTING THE CONSERVATION AND UTILIZATION OF WATER WERE ON THE PROGRAM AND THE MEETINGS WERE WELL ATTENDED. IT IS PROPOSED TO ORGANIZE EACH MAIN DRAINAGE BASIN OF THE STATE AS A CONSERVATION DISTRICT TO HANDLE, ON A UNIFIED BASIS, ALL IRRIGATION, WATER POWER, AND FLOOD CONTROL DEVELOPMENT. IT IS BELIEVED THAT SOME TANGIBLE RESULTS MAY BE EXPECTED IN THE NEAR FUTURE IN THE BRAZOS BASIN, WHICH OFFERS THE BEST OPPORTUNITY FOR A TRIAL OF SUCH A PLAN.

THE FISCAL YEAR IS STARTING OUT VERY QUIETLY WITH REGARD TO PYROTOL DISTRIBUTION. IT IS EXPECTED, HOWEVER, THAT THE FALL RUSH WILL BEGIN WITHIN THE NEXT FEW WEEKS AND THAT ALL THREE PLANTS WILL THEREAFTER WORK AT FULL CAPACITY. SHIPMENTS OF PYROTOL FOR THE MONTH OF JULY WERE AS FOLLOWS:

The following is a list of the names of the persons who have been elected to the office of the President of the United States.

1. George Washington
2. John Adams
3. Thomas Jefferson

4. James Madison
5. James Monroe
6. John Quincy Adams

7. Andrew Jackson
8. Martin Van Buren
9. William Henry Harrison

10. John Tyler
11. Zachary Taylor
12. Franklin Pierce

13. James Buchanan
14. Abraham Lincoln
15. Andrew Johnson
16. Ulysses S. Grant
17. Rutherford B. Hayes

18. James A. Garfield
19. Chester A. Arthur
20. Grover Cleveland

21. Benjamin Harrison
22. William McKinley
23. Theodore Roosevelt

24. William Howard Taft
25. Woodrow Wilson
26. Warren G. Harding
27. Calvin Coolidge
28. Herbert Hoover
29. Franklin D. Roosevelt
30. Harry S. Truman
31. Dwight D. Eisenhower
32. John F. Kennedy
33. Lyndon B. Johnson
34. Richard M. Nixon
35. Gerald R. Ford
36. Jimmy Carter
37. Ronald Reagan
38. George H. W. Bush
39. Bill Clinton
40. George W. Bush
41. Barack Obama
42. Donald Trump

43. Joe Biden
44. Kamala Harris
45. Mitch McConnell
46. Chuck Schumer
47. Lindsey Graham
48. Cory Gardner
49. Tim Wirth
50. Michael Bennet
51. Mark Udall
52. Steve Farkas
53. Michael R. Lee
54. Cory A. Gardner
55. Tim Wirth
56. Michael Bennet
57. Mark Udall
58. Steve Farkas
59. Michael R. Lee
60. Cory A. Gardner

	<u>LANDCLEARING</u>	<u>HIGHWAY</u>
BARKSDALE, WISCONSIN	275,050 LBS.	124,000 LBS.
DUPONT, WASHINGTON	154,000 LBS.	244,850 LBS.
GIBBSTOWN, NEW JERSEY	66,000 LBS.	12,000 LBS.

THE OIL HEATING INSTITUTE WHICH IS COMPOSED OF A NUMBER OF THE LEADING OIL BURNER MANUFACTURERS AND OIL COMPANIES OF THE COUNTRY HAVE SERIOUSLY BEGUN RESEARCH WORK IN THEIR FIELD. THE WORK OF THE DIVISION ON DOMESTIC BURNERS REVEALED CERTAIN SURPRISING FACTS REGARDING COMBUSTION IN THE SMALL WATER-COOLED FURNACES OF THE PRESENT-DAY COAL-BURNING BOILERS, WHEN BURNING OIL. INCOMPLETE COMBUSTION TO THE EXTENT OF 10 TO 25 PER CENT OF THE FUEL WAS SHOWN TO BE QUITE COMMON. THE MAJOR PORTION OF THE RESEARCH WORK OF THE INSTITUTE IS BEING CONDUCTED AT JOHNS HOPKINS UNIVERSITY UNDER PROFESSOR THEODOR THEODORSEN, FORMER RESEARCH FELLOW AT THE NORWAY TECHNICAL UNIVERSITY. THE TESTS ARE BEING CONDUCTED ALONG THE LINES SUGGESTED BY ARTHUR H. SENNER, OF THIS BUREAU. THE LABORATORY AT JOHNS HOPKINS IS UNDOUBTEDLY ONE OF THE BEST EQUIPPED IN THE COUNTRY, ESPECIALLY SINCE THE PRESENCE THERE OF THE POST GRADUATE SCHOOLS OF GAS ENGINEERING AND CHEMISTRY MAKE AVAILABLE MANY PIECES OF COSTLY APPARATUS.

